

## In The Claims

1. (Currently Amended) A method for determining the quality of milk, the method comprising the steps of:  
  
examining wherein a milk sample; and is examined, characterized in that the type of at least one detected  
  
applying an object recognition rule including the steps of:  
  
detecting an object is determined on the basis of at least one in the milk sample object recognition rule;  
  
distinguishing the object type as either a particle object or a non-particle object; and  
  
distinguishing the object type as either a mineral particle object or a biological particle object.
2. (Currently Amended) The method according to claim 1, ~~wherein at least one object is extracted and further comprising the step of:~~  
  
extracting the object from the sample.
3. (Canceled)
4. (Canceled)
5. (Currently Amended) The method according to claim 3~~1~~, wherein the non-particle object type ~~non-particle object comprises the object types~~ is a bubble object and/or reflection object and/or defect object.
6. (Currently Amended) The method according to claim 1, wherein ~~at least one portion of interest is identified which is characteristic of at least one object~~ the step of detecting an object in the milk sample comprises the step of:  
  
identifying an area of the object.

7. (Currently Amended) The method according to claim 1, wherein ~~at least one~~ the step of detecting an object from the milk sample based on the object recognition rules comprises the step of:

locating a boundary ~~locating routine is performed to determine objects of the object.~~

8. (Currently Amended) The method according to claim 1, ~~wherein at least one~~ and further comprising the steps of:

specifying an object parameter is specified for the object recognition rule; and

detecting that parameter in an object.

9. (Currently Amended) The method according to claim 8, ~~wherein at least one~~ wherein the step of specifying the object parameter comprises the step of:

optically capturing the object parameter is captured optically.

10. (Currently Amended) The method according to claim 8, wherein ~~at least one~~ the step of specifying the object parameter comprises the step of:

deriving the object parameter from ~~is derived from the~~ optical lightness of the object.

11. (Currently Amended) The method according to claim 8, wherein ~~at least one~~ the step of specifying the object parameter for the object recognition rule comprises the step of:

deriving the object parameter from ~~is derived from the~~ an outer contour of an object.

12. (Currently Amended) The method according to claim 8, wherein ~~at least one~~ the step of specifying the object parameter for the object recognition rule comprises the step of:

deriving the object parameter from contrast ~~is employed to specify at least one parameter of the object.~~

13. (Currently Amended) The method according to claim 8, ~~wherein at least one~~ the step of specifying the object parameter for the object recognition rule comprises the step of:  
deriving the object parameter from a color of the object ~~is employed to specify at least one parameter.~~
14. (Currently Amended) The method according to claim 1, and further comprising the step of:  
specifying a plurality of ~~wherein at least two~~ object parameters for the object recognition rule ~~are used~~ to determine an object type of a detected object.
15. (Currently Amended) The method according to claim 1, and further comprising the step of:  
employing ~~wherein~~ fuzzy logic ~~is used to determine from at least two~~ and vary a plurality of parameters an object type of ~~at least one~~ a detected object.
16. (Currently Amended) The method according to claim 1, and further comprising the step of:  
performing ~~wherein~~ gradient formation ~~is performed~~ in view of ~~at least one~~ a physical quantity, preferably quality wherein the physical quality is selected from the group of consisting essentially of: optical, acoustical and/or electrical properties, in particular the hue, intensity, saturation, electrical conductivity, electrical capacity, reflection, and transmission, and combinations thereof.
17. (Currently Amended) The method according to claim 1, ~~wherein at least one~~ and further comprising the step of:  
determining a characteristic value of ~~at least one~~ the object is determined.

18. (Currently Amended) The method according to claim 1, ~~wherein the at least one~~ and  
further comprising the step of:

specifying an object parameter is determined for the object recognition rule that is  
detectable through incident lighting and/or transmissive read.

19. (Currently Amended) The method according to claim 1, ~~wherein first the~~ and further  
comprising the steps of:

determining milk quality is determined based on an object type; and thereafter  
then selectively routing the milk is either routed to the a marketable milk container or  
discarded discarding the milk.

20. (Currently Amended) The method according to claim 1, ~~wherein at least~~ and further  
comprising the steps of:

routing a predetermined quantity of milk is routed into a measuring chamber having at  
least one acquisition unit;  
draining at least part of the liquid phase of the milk in from the measuring chamber; and is  
then drained out of the measuring chamber and then  
capturing an image of at least a portion of the measuring chamber surface is captured.

21. (Currently Amended) The method according to claim 1, ~~wherein at least~~ the step of:  
examining a milk sample comprises the steps of:

routing a predetermined quantity of milk is routed through across a measuring chamber  
surface comprising at least one capturing unit, wherein on which a film is  
preferably formed; and  
capturing an image of the measuring chamber surface captured.

22. (Currently Amended) The method according to claim 1, ~~wherein the~~ and further comprising the step of:

removing the object[[s]] ~~are isolated out of from the~~ milk sample.

23. (Currently Amended) The method according to claim 1, ~~wherein the~~ and further comprising the step of:

determining a frequency of object detections of ~~frequency of~~ for individual object types is ~~determined.~~

24. (Currently Amended) The method according to claim 1, ~~wherein~~ and further comprising the step of:

deriving a milk quality grade ~~is derived from~~ from ~~[[the]]~~ a detection frequency ~~of~~ for individual object types ~~and/or the object sizes of the different object types.~~

25. (Withdrawn) A method for recognizing objects in milk, characterized in that a milk sample to be examined is routed onto a measuring surface and an image of the measuring surface is captured, and at least one object recognition rule is employed to distinguish between at least two types of detected objects.

26. (Withdrawn) The method of claim 25 wherein particles are detected.

27. (Withdrawn) A device for determining the quality of milk, comprising:

a measuring chamber into which a sample can be routed;

a detector means for capturing at least a portion of the measuring chamber; and

a determination means which is suitable for determining a type of an object in the sample  
on the basis of at least one predefined object recognition rule.

28. (Withdrawn) The device according to claim 27, characterized by an identification means to identify at least one portion of interest which portion of interest is characteristic for an object.

29. (Withdrawn) The device according to claim 27, characterized by an extraction means for extracting a fault image from an image of the sample and a reference image wherein the fault image is employed for determining the at least one parameter.
30. (Withdrawn) The device according to claim 27, characterized in that a selection unit is provided such that depending on the quality, the milk is either routed to the marketable milk container or it is discarded.
31. (Withdrawn) The method according to claim 27, characterized in that at least a predetermined quantity of milk is routed into a measuring chamber having at least one capturing unit, at least part of the liquid phase of the milk in the measuring chamber is then drained out of the measuring chamber and then at least a portion of the measuring chamber surface is captured.
32. (Withdrawn) A method for providing a classification database for classifying objects in milk comprising the following steps:
- providing a reference image of a milk sample;
  - providing at least one image of at least one object;
  - extracting at least one fault image from the reference image and the image of an object;
  - providing a typing code;
  - determining characteristic properties of objects in the fault image; and
  - storing the characteristic properties to an object type of the typing code.
33. (New) The method according to claim 1, wherein the non-particle object type is a reflection object.
34. (New) The method according to claim 1, wherein the non-particle object type is a defect object.

Applicant: Wiethoff et al.  
Application No.: 10/587,065

35. (New) The method according to claim 1, and further comprising the step of:  
specifying an object parameter for the object recognition rule that is detectable through  
a transmissive read method.
36. (New) The method according to claim 1, and further comprising the step of:  
deriving a milk quality grade from an object detection frequency for individual object  
sizes.
37. (New) The method according to claim 1, and further comprising the steps of:  
distinguishing the object from a defect; and  
excluding the defect from being considered by the object recognition rule.